South Carolina Lowcountry Refuges Complex

October, 2011

Volume 4

Life in the Wild

News from Cape Romain, Ernest F. Hollings ACE Basin, Santee and Waccamaw National Wildlife Refuges

Avian Adventure

By Captain Chris Crolley, Naturalist, Coastal Expeditions

The Island Cat is fully loaded this morning and we are beginning our journey through the oyster-lined tidal creek. Coastal Expeditions began this adventure with Cape Romain Refuge in 1994 as the Concessionaire for group services. Nearly five years had passed since Hurricane Hugo so we were on hand to witness the Island's attempts to heal itself from Hugo's landfall.

Today we continue to bear witness to environmental challenges of both natural and human origin. From the very beginning, it has been a privilege and a personal awakening to study and experience the islands and estuaries of Cape Romain, and to spend time with all the fascinating people we encounter on this remarkable seascape.

We aren't alone in our enthusiasm. For many years Cape Romain's feathered beings have captured hearts and souls. Birders of historic distinction and worldwide fame have been here, where we are today. Mark Catesby, Alexander Wilson, and John James Audubon have all journaled their adventures here, immortalizing the avian specimens in lithographic tribute.

As we make our way to Bulls Island we hear the high-pitched whistle of American oystercatchers. They are bantering on the wing, waiting for the tide to recede and slowly reveal their favorite food; thriving and abundant oysters. These seafood lovers expertly tip toe through the shell colonies on pink three-toed feet. Their blood-red eyes and flattened orange beaks are a foil to the bivalve fortress of the delicious mollusk. There are impressive flocks of over three hundred of these birds nesting in the refuge. Half of all of the state's American oystercatchers



Pelicans fly alongside the ferry en route to an adventure on Bulls Island. Credit: Tom Blagdon

nest in Cape Romain and nearly 30% of the Atlantic coast population overwinter here

"I never for a day gave up listening to the songs of our birds, or watching their peculiar habits, or delineating them in the best way I could."

By John James Audubon

The Eastern Brown pelican feeds, breeds, and lives year round on the refuge. Pelicans have been around for 30 million years and their pouch-like beaks haven't changed much in all that time. They can cruise the saltwater highway inches above the water or dive headlong into the sea from as high as thirty feet in the air, propelling themselves headlong to capture fish in their voluminous pouch. The Northern Gannet, cousins of the pelicans, spearhead directly into the water as well.

Black Skimmers are also masters of flight. These specialized aerial dancers are sublime on the wing. As their name implies they skim the surface of the water with their beaks open like a pair of sharp scissors. Their underbite cleaves the waters, feeling for and enveloping small fish and shellfish on the fly. The skimmer is the only bird in the world whose lower bill is longer than the upper. They command their place in the food chain, hunting in twos and threes on the beachfront and in the still waters of lower tides in the creeks.

The old fire tower on the Island witnesses our arrival and we pass by the edge of the maritime forest where a Painted bunting is declaring his territorial boundaries. He is the most colorful song bird in North America, with splashes of green, blue, yellow, and red. Breeding pairs hunt the grassland edges together, one perching as lookout while the other forages for seeds and insects.

We have witnessed the Great Horned owls fledge their young in the grand oaks in front of the Dominic House. The Osprey, Northern Harrier, Bald eagle, Peregrine falcon, Red-tailed hawk, Sharpshinned hawk,

Coopers (continued on page 2)



Avian Adventure

(continued from page 1)

Hawk, the Kestrel and Merlin, all magnificent birds of prey, prowl the sky like death on the wing.

Endangered Wood storks glide on thermals and wade through the shallows of the creeks and ponds. They are the only stork native to North America. They are large impressive birds with bald gray heads, thick curved beaks, and black trailing edges on their wings. In flight their shape resembles a flying cross with an outstretched neck and long trailing legs. They see the refuge from on high among the horse tail cirrus clouds, and down low in the plough mud bottoms where they shuffle through the shallows, waving one foot in front of their sweeping beak to rustle up a meal of worms and shellfish. They are joined by a pair of immature Roseate spoonbills, barely pink from their shellfish diets.

There have been days when Jacks Pond held so many ducks that it looked like a mud puddle. Dabbling, diving, preening birds covered the water. We have seen canvasbacks by the hundreds, buffle heads, green and blue winged teal, hooded and common mergansers, mottled and black ducks, mallards, shovelers, pintail, wigeon, gadwall, red heads, golden eyes, and ruddy ducks.

You never know what your binoculars might find. Thousands of barn swallows funneling into themselves, casting shadows like a disco ball on the ground, only to disappear as if commanded into the green wax myrtle. It shivers with the trembling colony of acrobats. Was that a lone Magnificent Frigate bird high in the cumulus? Could that have been a Golden eagle on the beach? It looked too big to be a young bald. Was that a Long-eared owl in the shadows ahead?

As I write this account I am receiving a text. It seems that a pair of Swallow-tailed kites are cavorting above Beach Road. I wish I were there. I wish you were there. As a matter of fact there is still time for you to catch the 12:30 Ferry. Come join us on this avian adventure.

Are These Eggs for Real?

It would be a rare day indeed, to be out in the creeks and bays of Cape Romain NWR and not catch sight of an American oystercatcher hanging out on the shell rakes. The Refuge is widely known for these strictly coastal, colorful shorebirds, especially during the winter months, when the largest population on the East Coast finds safe harbor at Cape Romain. If you're lucky you might see one pry open an oyster with its bright red-orange bill

The U.S. Shorebird Conservation Plan lists the American oystercatcher as an "extremely high priority" shorebird because their numbers are on the decline. Researchers have suggested that the decline may be due to the bird's low reproductive success.



Wood eggs were placed in nests as placeholders. Credit: Samantha Collins.

Cape Romain provides nesting habitat for oystercatchers on barrier beaches as well as washed shell mounds, supporting over half of the breeding pairs in South Carolina. The nest is a scraped out depression in sand or shells. Oystercatchers nest on shells mounds because the beaches are busy, populated with people and dogs.

For the past two summers, Samantha Collins, a graduate student of Clemson University, has studied refuge oystercatchers to evaluate their nesting success. Factors that affect nesting success include habitat loss, overwash, predation by raccoons and mink, and human disturbance. This summer, the focus areas for the study included the shell rakes along the Intracoastal Waterway, all rakes in southwest Bulls Bay and West White Banks, and a secluded shell rake island in the Refuge.

Samantha used cameras and telemetry to monitor nesting success and chick survival. Video cameras showed that raccoons are the most common nest.

predators during the egg incubation stage, followed by mink. She also used a very innovative technique to safeguard eggs until they could hatch. Samantha collected some of the eggs from the nests and incubated them in a laboratory, away from drenching boat wakes and prowling raccoons. After the eggs hatched, she immediately returned the chicks to the nest. This technique is called "headstarting."

The adult oystercatchers didn't notice that their eggs were missing because Samantha replaced each egg that she removed with a wooden egg painted to resemble the real thing. At first, the wooden eggs were anchored with a large nail. Marauding raccoons were able to pull the egg out of the nest scrapes though, and this caused the adults to abandon the nest. The anchor system was revised to an 18" piece of rebar, which prevented the raccoon from removing the egg entirely. Scratches and teeth marks on the wooden egg bore witness to their attempts to eat it in place.



After the eggs hatch, the chicks are immediately returned to the nest. Credit: Sarah Woodward.

Samantha's research found that overwash, particularly from boat wakes as boaters travel too close to the shell rakes, contributed to nest failure, and caused adults to abandon the nest. It was also responsible for failure of the eggs to hatch, and with the adults gone, predation. Nest failure from over wash is expected to increase as rising sea levels bring higher tides. Samantha's innovative study has provided new information that will help inform future refuge management decisions at Cape Romain NWR.

Bird in the Hand

Recollections of Spenser Bradley, Summer Employee and Student at the University of Knoxville in Tennessee.



Spenser Bradley prepares to release a freshly banded Wood duck. Credit: Matt Hill, STEP/USFWS.

I vividly recall the morning we banded Wood ducks at Ernest F. Hollings ACE Basin Refuge. The bands are placed on their legs to help monitor populations, migrations, and hunter harvests. We had set up a rocket net to catch the ducks and afterward, we waited patiently in a blind. It was just before sunrise. The mosquitoes hummed around us as the sun rose behind the brackish pond. Its reflection cast a soft glow on our blind.

As the sun lightened the area, ducks began to land on the water, apparently oblivious to nearby alligators. Occasionally a foraging fish would swirl the water around them. Soon the ducks swam slowly toward the bank. They were initially reluctant to come ashore and feed on the wheat seeds we had placed before dawn that day. Then a leader emerged from the water and walked up to the seeds. Others followed. They gently pecked at each other, jockeying for the best position over the wheat seeds. The rocket ignited, like a shotgun blast, and cast a net over the ducks. Excited, we walked to the net to find that we had nearly 50 Wood ducks, all ready for their leg bracelets.

Blown Away



Cape Island's damaged dock will be rebuilt. Credit: Sarah Dawsey



Billy Shaw, Turtle Recovery Team, removes Hurricane Irene's debris from turtle nest hatchery. Credit: Sarah Dawsey

When Hurricane Irene blew past South Carolina on her way north on August 26, she sent a storm surge and battering winds to Cape Romain NWR. Cape Island, the refuge's northernmost barrier island, suffered the worst damage. The Island was overrun by surging waters that cut three small breaches on the North end and three large breaches on the South end that eliminated a mile of shoreline. The dock, nearly 20 years old, will need to be rebuilt.

Overnight, the damaging storm washed away 126 protected turtle nests, and washed over and buried 126 of the remaining 201 nests in 3-4 feet of sand.

Overall, approximately 30% of the total nests for the 2011 nesting season were impacted by the storm, either lost or washed over. The good news is that this year's nesting season was a banner year; 1,075 nests (74% of the nests laid on the Refuge in 2011) had already been laid on the Island and many had hatched prior to the storm.

The Turtle Recovery Team began work the next day to assess the damages and to rescue buried nests. Workers noted an extremely good sign within days. A few fresh hatchling tracks from the buried hatcheries led on a meandering path to the water.

Bulls Island is for the Birds



Today's rice trunks retain the historic name but are vastly different from their predecessors. Credit: Dan Ashworth

Spring has arrived at Bulls Island. From within the dense stand of cordgrass in Jacks Pond comes the melodious, reedy trill of the Marsh wren. Blacknecked stilts, striking with their long, spindly "bubble-gum" pink legs, feed on small fish in the shallow waters of the pond. A Spotted sandpiper, displaying its characteristic "tail-bobbing", darts around at the water's edge foraging on insects. A pair of Black-bellied plovers and a Whimbrel alight on the sandy flat near the Bay.

The aerial skyway along the Atlantic Coast is their freeway and national wildlife refuges along the route provide places to rest, breed, nest, and feed on an abundant smorgasbord of fish, insects, invertebrates and crustaceans.

During spring and summer Cape Romain's managed wetlands, maritime forest, shrub thickets, and beach are teeming with bird life. Over 293 bird species can be found here, with most sighted on or near Bulls Island. Visitors to the Island commonly see resident and migrant songbirds, seabirds, shorebirds, wading birds and raptors as they go about their life's business of nesting, foraging, roosting and resting. Bulls Island's habitats are especially vital for several bird species that are considered endangered, threatened or in great decline. The endangered Wood stork forages for fish in managed wetlands, then roosts in nearby trees. More often heard than seen, the brilliantly colored Painted bunting, a favorite among bird watchers, construct their cup-shaped nests in the Island's shrub thickets and lay three to four brown speckled eggs.

Everybody's Talkin' at Me
"I'm goin' where the sun keeps shinin',
thru the pourin' rain
Goin' where the weather suits my clothes
Bankin' off of the northeast wind,
sailin' on a summer breeze
...skippin' over the ocean like a stone."
By Fred Neil

The sandy beach front shelters nesting Wilson's plovers and Least terns, both species that are struggling to survive due to a loss of breeding habitat. Some parts of the beach are specially protected as designated Critical Habitat for the threatened Piping plover.

Since 1936, water depths in the managed wetlands on Bulls Island have been raised and lowered seasonally to encourage the growth of waterfowl food plants and macro-invertebrates (snails, insects). Many years ago, when rice culture was a lucrative business in South Carolina, water levels in the rice fields were managed with "rice trunks". The rice trunk takes its name from the hollow cypress trunks that were used to move water from one field to another and to control water levels in the fields.

Today's rice trunks retain the historic name, but are vastly different. The next time you visit Bulls Island, stop by the remains of our Martello Tower and take a look at the nearby rice trunk for Jacks Pond. No longer hollow cypress logs, rice trunks of the 21st century are constructed of treated pine boards, flap gates, and a flashboard riser.



Black-necked stilts forage in shallow water for invertebrates. Credit: Lisa Cox

In 2010 new rice trunks were placed in six interior managed wetlands deep within the Island to improve water management capability. Five culverts with stop logs were also placed in managed wetlands away from the eroding eastern shoreline. When Jacks Pond, the largest wetland on the island, is threatened by storms, erosion, and rising seas, these interior wetlands will provide quality habitat for birds for years to come. As habitat conditions continually evolve, management will continue to employ adaptive strategies to meet challenges.

As the seasons roll over throughout the vear, birds come and go. After the nesting season, the birds that summer with us will launch off on the next leg of their journey. Shorebirds on their way back to their wintering grounds will drop from the sky and seek food in the refuge's mud flats. Cooler weather will bring Bluewinged teal, American wigeon, Ruddy duck, and Lesser scaup. They will spend the winter months with us, foraging on plants and macro-invertebrates and loafing in the open water. Greater and Lesser yellowlegs and Long-billed dowitchers will stop by along with other wintering shorebirds, forever alighting on Cape Romain in a lively quest for fish, insects, and small crabs.

Citizens Supporting Science

In a society teeming with smart phones and electronic tablets, it can be difficult for younger generations of naturalists to imagine a time when bird sightings were reported through the traditional mail system. In past decades, researchers relied on the U.S. Postal Service and the goodwill of outdoorspeople to relay crucial band data. From these sighting reports, researchers were able to glean essential information about a bird species, such as its speed and direction as well as its lifespan. Today, the process of reporting banded birds in the United States is expedited by a national hotline and an online database. This database allows the sharing of information on hundreds of species across the country, from the Northern parula to the Canada goose to the Tricolored heron.

In South Carolina, the distinguished Swallow-tailed kite lavs claim to its own statewide hotline and online database for sightings. The South Carolina Department of Natural Resources lists the status of the fork-tailed raptor as "endangered." A number of measures have been implemented to reverse the decline. For example, when Waccamaw National Wildlife Refuge was established in 1997, it was formed in part to protect vital Swallow-tailed kite nesting habitat in the Waccamaw and Pee Dee river systems. Today the refuge is the northernmost documented nesting site for the species.



Swallow-tailed kites can catch prey and eat it mid-flight. Credit: Danny Bales.

The decline of the species has also been addressed by the South Carolina Working Group for Swallow-tailed Kites. This group unites scientists, researchers, land managers and conservationists from a variety of organizations and agencies, such as the U.S. Fish and Wildlife Service, U.S. Forest Service, SC Department of Natural Resources, The Center for Birds of Prey, The Nature Conservancy, and Audubon South Carolina.

In 2007, the Working Group initiated what would be known as an online "citizenscience" database for kites. Now, for the first time ever, anyone can play a role in the conservation of the Swallow-tailed kite. Because Kites can be easily identified by their deeply forked tail and striking coloration, with a white head and body, and black wings and tail, sightings can be reported by any birder at any skill level, ranging from beginner to expert.

If you're in South Carolina and are lucky enough to spot this majestic bird, The Working Group encourages you to report your sighting either online at www. thecenterforbirdsofprey.org or by calling the Hotline at 1-866-971-7474.

You will be asked to recollect the time, location, number of kites observed, and the kite's behavior (soaring, perching, vocalizing), so pay special attention when and if you do observe the easily recognizable glider.

What's more (and true to tradition), you can still mail sighting reports to

The Center for Birds of Prey P.O. Box 1247 Charleston, SC 29402

Regardless of the method you use to report your sightings, your role in the conservation of this majestic species will be much appreciated.

Chasing Kites
By Margaret Sands, Student
Conservation Association Intern

When I arrived at the Waccamaw National Wildlife Refuge on the first day of my internship, I had never even heard of a Swallow-tailed kite. Everyone around me talked about them so I tried to play along and pretend I knew what all the excitement was about. They were carved into the sign at the entryway, photographs of them hung in the hallway, and an illustration of one was emblazoned on the back of the t-shirt I received. Before long, I would learn all about this amazing bird.

Craig Sasser, Refuge Manager, described it, "It's a bird that anyone from anywhere can spot and know that they're seeing something important, something exciting and beautiful."

I was anyone from anywhere and on May 24, 2011, I saw my first, second, third, and fourth Swallow-tailed kite, all rising together on an updraft over the river. When I saw them, I was hooked. There is no doubt that their form makes them distinctive; their silhouette, once you know it, is hard to mistake. The "V" shape in their black tail not only identifies them against the sky but also helps to steer them as they glide on the momentum from their powerful wings. They seemed to ascend through pure aversion to gravity rather than exertion, their massive wings held stationary as though they were outstretched only to show off their simplistically elegant coloration. This knack for gliding allows a Swallow-tailed kite to glean prey from branches, grass, or the air and eat it mid-flight.

This summer was memorable for many reasons, but most of all because I got to observe what it takes to collect important facts about wildlife that are struggling to survive. Just a few weeks after I saw the Swallow-tailed kites soaring over the river I left the cool comfort of the Waccamaw Visitor Center and joined a field team of researchers from the Avian Research and Conservation Institute. We took the scenic route through the beautiful wetland forest, into the swamp, past ancient cypress trees, and abandoned logging roads. The Team carried their handy GPS units with

them as we walked through knee-deep swamp mud, toward the tree we had been seeking.

The nest had been found by McClellanville native Larry Wood, who donates his time, energy, and impressive nest-seeking skills to help preserve a bird he has come to understand and respect. Larry met us at the nest site with as little difficulty as if we had asked him to meet us at the neighborhood Starbuck's, rather than an unmarked spot in the middle of a swamp.

After rigging a rope over one of the uppermost branches of the 140-foot tree using a crossbow and duct tape, one of the researchers donned a helmet, harness, and other safety precautions, and climbed to the top. I waited with the rest of the team on the ground around the perimeter. As he climbed, we watched for "jumpers", nestlings that might get nervous and jump from the nest to the ground. If that happened they would need to be found, tagged, and returned to the nest.



Researchers steady a juvenile Swallow-tailed kite for its transmitter. Credit: Margaret Sands.

Once at the top, our climber found one nestling sheltered in the nest. Sometimes there are as many as two or three. He lowered the nestling down to me in a coffee can contraption enveloped by a pillowcase. When I reached for the nestling and held it in my hands I was surprised. This six-week old bird was already almost a foot long!

Once on the ground, the researchers measured the nestling and attached a small radio transmitter. The transmitter fits like a backpack with straps that the bird will quickly preen into his or her plumage. In less than 45 minutes the process was complete and the bird was replaced in the nest.

Skybird
"Look at the way I glide
Caught on the winds lazy tide
Sweetly how it sings,
Rally each heart
At the sight of your silver wings"

By Neil Diamond

The team from the Avian Research and Conservation Institute repeated this process twelve times throughout the months of June and July, not including the eight nests that were found in trees deemed "unclimbable." In a year, they will return to see how many of the juveniles survived migration and returned to this lush swamp.

In my environmental classes I have learned about far too many extinct and endangered species whose predicament came to light much too late to save them. At the moment, the worldwide population of Swallow-tailed kites seems to be stable. But every year fewer and fewer return from their wintering grounds in Brazil. Soon we will know for sure if this apparent trend is a reality here in South Carolina. As for me, I am confident that the South Carolina sky will continue to be marked with the distinguished silhouettes of Swallow-tailed kites because I have witnessed the personal dedication that is the essential ingredient for effective protection.

Birds!! South Carolina's Eye Candy Each year in April, the Santee Birding

Each year in April, the Santee Birding and Nature Festival will once again lure nature enthusiasts and birders to South Carolina's midlands for a three-day celebration. It is no coincidence that the Festival is planned at the same time as the arrival of South Carolina's 'eye candy', a delightful collection of colorful Neo-tropical songbirds.

The annual Festival is organized by many partners including the U.S. Fish and Wildlife Service (Santee NWR, Cape Romain NWR, Charleston ES) National Park Service, Santee State Park, SC Department of Natural Resources, Audubon South Carolina, SC Nature-Based Tourism Association, Tri-County Regional Chamber of Commerce and Santee Cooper Country.

Birders arrive armed with binoculars, cameras with telephoto lenses, and spotting scopes, eager to see Painted buntings, Yellow-throated vireos, and Prothonotary warblers. Other festival participants enjoy the photography workshops and a variety of field trips to Santee NWR, Congaree National Park, Beidler Forest, and the midlands State Parks. Experienced guides lead bird, butterfly and wildflower tours into oldgrowth Bald cypress swamps, Longleaf pine forests and freshwater marshes.



The male Painted bunting is one of the continent's most extravagantly colorful birds. Credit: Marc Epstein.

Participants paddle kayaks and canoes on slow-moving blackwater creeks and through swamp sanctuaries, while others take boat trips on Lake Marion.

Join us in 2012, when the Santee Birding and Nature Festival will be held April 27th – April 29th. Find out more at www.fws.

Flying High with Dream a Dream



The children learn they can fly just like the Red knot. Credit: NaTasha Stokes-Frazier.

This past summer, Coastal Carolina University and Cape Romain NWR delighted children ages five to twelve, with the wonders of nature. The event was made possible by the National Fish and Wildlife Foundation's *Dream a Dream: Cultivating Environmental Stewards for a Better Tomorrow.*

The children's adventure began in Conway, South Carolina where they boarded a bus and journeyed south to the Sewee Visitor and Environmental Education Center near Awendaw, SC. At the Sewee Center the children learned all about shorebirds, particularly the Red knot, a shorebird that flies all the way from South America to its nesting grounds in the Arctic.

One of the most important lessons about Red knots is that their bones are hollow and contain air sacs that help them fly extremely long distances.

Using paper towel rolls to simulate hollow bones, and balloons as air sacs, student after student became a Red knot.

That day, at the Sewee Center, they flew, they dodged clouds, they lived the lives of Red knots. Spilling out of the building onto the grounds they then experienced the hazards of migration first hand. Heading north, the Red knot students dodged storms as well as dogs and people on their way to their imaginary nesting grounds, enjoying horseshoe crab eggs (simulated by pipe cleaners) on the way.

The second day the children rode the Island Cat

Ferry through Cape Romain's pristine tidal creeks to Bulls Island. It was the highlight of their trip. A naturalist guided them to the beach and around the island. They were excited and thrilled to see the wildlife that depend on Cape Romain, especially American oystercatchers, pelicans, dolphins, and alligators.

Dream a Little Dream
"Stars shining bright above you
Night breezes seem to whisper I love you
Birds singin' in the sycamore tree
Dream a little dream of me."

By Gus Kahn

Using National Wildlife Refuges for community-based education helps students connect classroom lessons to real world issues and promotes a greater understanding of local conservation issues. The children from Conway, South Carolina learned about stewardship for natural resources and that they could fly, just like the Red knot.

"Gourdheads" in the ACE Basin



It takes 440 pounds of food to feed a family of four Wood storks during nesting periods. Credit: Brian Woodward/USFWS.

The American Wood stork is the only native North American stork. There are many nicknames for the Wood stork, including "flinthead", "Spanish buzzard", "gourdhead", and "ironhead", all derived from the appearance of the Wood stork's dark bald head. Of all the nesting colonies in South Carolina today, most are found in the ACE Basin area surrounding the Ernest F. Hollings ACE Basin National Wildlife Refuge.

Nine Wood Storks

"Wood stork spends his day in the flats Lookin' for food wherever it's at. Wood stork's food comin' slow down the chain:

Then comes a cloud, and it looks like rain."

By Dan Gribbin

With its large size and a wing span over five feet, strong and deep wing beats enable the stork to gain altitude where they glide effortlessly on wind currents and warm thermals. Usually seen soaring side by side in loose groups numbering anywhere from two to forty birds, storks circle high, getting a "bird's eye view" before gliding down to their nesting colonies, roosting sites and foraging areas.

Wood storks will not nest without an ample supply of food to feed their chicks. During nesting periods, it takes 440 lbs. of food to feed a family of four. Wood storks feed by tactilocation, made possible by a membrane in their mouth that is very sensitive to touch. The stork opens it bill underwater and then waits for the touch of a fish or other animal that is passing by. The Wood stork's bill can snap shut in as little as 1/40th of a second, then the fish is swallowed with a backward jerk of the stork's head.

During the rice-growing years in the 1700's, rice trunks were used to move water between tidal creeks or rivers and the impoundments. Rice trunks are also used today in impoundments that were formally rice fields. The impoundments provide important fishery areas for adult storks who are nesting in other areas of the ACE Basin.

At EFH ACE Basin Refuge, several hundred Wood storks congregate in shallow impoundments where they feed upon a buffet of small fish, crayfish, tadpoles and frogs, aquatic insects, snakes and even young alligators. Shallow brackish-water areas on Jehossee Island have attracted and provided excellent foraging habitat for 300-600 and, occasionally more than 900 Wood storks.

two artificial nesting platforms and flooded the areas around them to deter predators. The expectation was that Wood storks would use the platforms for nesting. Wooden stork decoys were also placed in wetlands on the refuge to attract storks. The storks have not shown any interest in nesting on the platforms, but they did land in and among the wooden decoy storks. They weren't the only ones fooled. Bird watchers and other visitors came by and mistook the decoys for live wood storks and reported them to the refuge office.

Not long ago, refuge employees placed

EFH ACE Basin Refuge is located south of Charleston, SC, near Hollywood. The next time you have a few hours free, drive over and look for "gourdheads" in refuge impoundments. You can find directions to the refuge at www.fws.gov/acebasin

Contact Information SC Lowcountry Refuges Complex

South Carolina Lowcountry Refuges Complex Raye Nilius, Project Leader 843/928 3264 Raye Nilius@fws.gov

Cape Romain NWR Sarah Dawsey, Refuge Manager 843/928 3264 Sarah_Dawsey@fws.gov

Ernest F. Hollings ACE Basin NWR Mark Purcell, Refuge Manager 843/889 3084 Mark_Purcell@fws.gov

Santee NWR Marc Epstein, Refuge Manager 803/478 2217 Marc Epstein@fws.gov

Waccamaw NWR Craig Sasser, Refuge Manager 843/527 8069 Marshall Sasser@fws.gov